

RAW SEQUENCE LISTING

**The Biotechnology Systems Branch of the Scientific and Technical
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Application Serial Number: 091529722
Source: IFW16
Date Processed by STIC: 2/28/07

ENTERED



IFW16

RAW SEQUENCE LISTING

PATENT APPLICATION: US/09/529,722

DATE: 02/28/2007

TIME: 10:22:09

Input Set : A:\seqlsiting.txt
 Output Set: N:\CRF4\02282007\I529722.raw

3 <110> APPLICANT: Squirrel, David *OK*
 5 <120> TITLE OF INVENTION: Expression system
 7 <130> FILE REFERENCE: 1498 139
 9 <140> CURRENT APPLICATION NUMBER: US 09/529,722
 10 <141> CURRENT FILING DATE: 2000-04-19
 12 <160> NUMBER OF SEQ ID NOS: 5
 14 <170> SOFTWARE: PatentIn version 3.3
 16 <210> SEQ ID NO: 1
 17 <211> LENGTH: 550
 18 <212> TYPE: PRT
 19 <213> ORGANISM: Photinus pyralis
 21 <400> SEQUENCE: 1
 23 Met Glu Asp Ala Lys Asn Ile Lys Lys Gly Pro Ala Pro Phe Tyr Pro
 24 1 5 10 15
 27 Leu Glu Asp Gly Thr Ala Gly Glu Gln Leu His Lys Ala Met Lys Arg
 28 20 25 30
 31 Tyr Ala Leu Val Pro Gly Thr Ile Ala Phe Thr Asp Ala His Ile Glu
 32 35 40 45
 35 Val Asn Ile Thr Tyr Ala Glu Tyr Phe Glu Met Ser Val Arg Leu Ala
 36 50 55 60
 39 Glu Ala Met Lys Arg Tyr Gly Leu Asn Thr Asn His Arg Ile Val Val
 40 65 70 75 80
 43 Cys Ser Glu Asn Ser Leu Gln Phe Phe Met Pro Val Leu Gly Ala Leu
 44 85 90 95
 47 Phe Ile Gly Val Ala Val Ala Pro Ala Asn Asp Ile Tyr Asn Glu Arg
 48 100 105 110
 51 Glu Leu Leu Asn Ser Met Asn Ile Ser Gln Pro Thr Val Val Phe Val
 52 115 120 125
 55 Ser Lys Lys Gly Leu Gln Lys Ile Leu Asn Val Gln Lys Lys Leu Pro
 56 130 135 140
 59 Ile Ile Gln Lys Ile Ile Met Asp Ser Lys Thr Asp Tyr Gln Gly
 60 145 150 155 160
 63 Phe Gln Ser Met Tyr Thr Phe Val Thr Ser His Leu Pro Pro Gly Phe
 64 165 170 175
 67 Asn Glu Tyr Asp Phe Val Pro Glu Ser Phe Asp Arg Asp Lys Thr Ile
 68 180 185 190
 71 Ala Leu Ile Met Asn Ser Ser Gly Ser Thr Gly Leu Pro Lys Gly Val
 72 195 200 205
 75 Ala Leu Pro His Arg Thr Ala Cys Val Arg Phe Ser His Ala Arg Asp
 76 210 215 220
 79 Pro Ile Phe Gly Asn Gln Ile Ile Pro Asp Thr Ala Ile Leu Ser Val
 80 225 230 235 240
 83 Val Pro Phe His His Gly Phe Gly Met Phe Thr Thr Leu Gly Tyr Leu

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84	245	250	255
87	Ile Cys Gly Phe Arg Val Val Leu Met Tyr Arg Phe Glu Glu Glu Leu		
88	260	265	270
91	Phe Leu Arg Ser Leu Gln Asp Tyr Lys Ile Gln Ser Ala Leu Leu Val		
92	275	280	285
95	Pro Thr Leu Phe Ser Phe Phe Ala Lys Ser Thr Leu Ile Asp Lys Tyr		
96	290	295	300
99	Asp Leu Ser Asn Leu His Glu Ile Ala Ser Gly Gly Ala Pro Leu Ser		
100	305	310	315
103	Lys Glu Val Gly Glu Ala Val Ala Lys Arg Phe His Leu Pro Gly Ile		
104	325	330	335
107	Arg Gln Gly Tyr Gly Leu Thr Glu Thr Thr Ser Ala Ile Leu Ile Thr		
108	340	345	350
111	Pro Glu Gly Asp Asp Lys Pro Gly Ala Val Gly Lys Val Val Pro Phe		
112	355	360	365
115	Phe Glu Ala Lys Val Val Asp Leu Asp Thr Gly Lys Thr Leu Gly Val		
116	370	375	380
119	Asn Gln Arg Gly Glu Leu Cys Val Arg Gly Pro Met Ile Met Ser Gly		
120	385	390	395
123	Tyr Val Asn Asn Pro Glu Ala Thr Asn Ala Leu Ile Asp Lys Asp Gly		
124	405	410	415
127	Trp Leu His Ser Gly Asp Ile Ala Tyr Trp Asp Glu Asp Glu His Phe		
128	420	425	430
131	Phe Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly Tyr Gln		
132	435	440	445
135	Val Ala Pro Ala Glu Leu Glu Ser Ile Leu Leu Gln His Pro Asn Ile		
136	450	455	460
139	Phe Asp Ala Gly Val Ala Gly Leu Pro Asp Asp Asp Ala Gly Glu Leu		
140	465	470	475
143	Pro Ala Ala Val Val Val Leu Glu His Gly Lys Thr Met Thr Glu Lys		
144	485	490	495
147	Glu Ile Val Asp Tyr Val Ala Ser Gln Val Thr Thr Ala Lys Lys Leu		
148	500	505	510
151	Arg Gly Gly Val Val Phe Val Asp Glu Val Pro Lys Gly Leu Thr Gly		
152	515	520	525
155	Lys Leu Asp Ala Arg Lys Ile Arg Glu Ile Leu Ile Lys Ala Lys Lys		
156	530	535	540
159	Gly Gly Lys Ser Lys Leu		
160	545	550	
163	<210> SEQ ID NO: 2		
164	<211> LENGTH: 548		
165	<212> TYPE: PRT		
166	<213> ORGANISM: Luciola cruciata		
168	<400> SEQUENCE: 2		
170	Met Glu Asn Met Glu Asn Asp Glu Asn Ile Val Val Gly Pro Lys Pro		
171	1 5 10 15		
174	Phe Tyr Pro Ile Glu Glu Gly Ser Ala Gly Thr Gln Leu Arg Lys Tyr		
175	20 25 30		
178	Met Glu Arg Tyr Ala Lys Leu Gly Ala Ile Ala Phe Thr Asn Ala Val		

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179	35	40	45	
182	Thr Gly Val Asp Tyr Ser Tyr Ala Glu Tyr Leu Glu Lys Ser Cys Cys			
183	50	55	60	
186	Leu Gly Lys Ala Leu Gln Asn Tyr Gly Leu Val Val Asp Gly Arg Ile			
187	65	70	75	80
190	Ala Leu Cys Ser Glu Asn Cys Glu Glu Phe Phe Ile Pro Val Ile Ala			
191	85	90	95	
194	Gly Leu Phe Ile Gly Val Gly Val Ala Pro Thr Asn Glu Ile Tyr Thr			
195	100	105	110	
198	Leu Arg Glu Leu Val His Ser Leu Gly Ile Ser Lys Pro Thr Ile Val			
199	115	120	125	
202	Phe Ser Ser Lys Lys Gly Leu Asp Lys Val Ile Thr Val Gln Lys Thr			
203	130	135	140	
206	Val Thr Thr Ile Lys Thr Ile Val Ile Leu Asp Ser Lys Val Asp Tyr			
207	145	150	155	160
210	Arg Gly Tyr Gln Cys Leu Asp Thr Phe Ile Lys Arg Asn Thr Pro Pro			
211	165	170	175	
214	Gly Phe Gln Ala Ser Ser Phe Lys Thr Val Glu Val Asp Arg Lys Glu			
215	180	185	190	
218	Gln Val Ala Leu Ile Met Asn Ser Ser Gly Ser Thr Gly Leu Pro Lys			
219	195	200	205	
222	Gly Val Gln Leu Thr His Glu Asn Thr Val Thr Arg Phe Ser His Ala			
223	210	215	220	
226	Arg Asp Pro Ile Tyr Gly Asn Gln Val Ser Pro Gly Thr Ala Val Leu			
227	225	230	235	240
230	Thr Val Val Pro Phe His His Gly Phe Gly Met Phe Thr Thr Leu Gly			
231	245	250	255	
234	Tyr Leu Ile Cys Gly Phe Arg Val Val Met Leu Thr Lys Phe Asp Glu			
235	260	265	270	
238	Glu Thr Phe Leu Lys Thr Leu Gln Asp Tyr Lys Cys Thr Ser Val Ile			
239	275	280	285	
242	Leu Val Pro Thr Leu Phe Ala Ile Leu Asn Lys Ser Glu Leu Leu Asn			
243	290	295	300	
246	Lys Tyr Asp Leu Ser Asn Leu Val Glu Ile Ala Ser Gly Gly Ala Pro			
247	305	310	315	320
250	Leu Ser Lys Glu Val Gly Glu Ala Val Ala Arg Arg Phe Asn Leu Pro			
251	325	330	335	
254	Gly Val Arg Gln Gly Tyr Gly Leu Thr Glu Thr Thr Ser Ala Ile Ile			
255	340	345	350	
258	Ile Thr Pro Glu Gly Asp Asp Lys Pro Gly Ala Ser Gly Lys Val Val			
259	355	360	365	
262	Pro Leu Phe Lys Ala Lys Val Ile Asp Leu Asp Thr Lys Lys Ser Leu			
263	370	375	380	
266	Gly Pro Asn Arg Arg Gly Glu Val Cys Val Lys Gly Pro Met Leu Met			
267	385	390	395	400
270	Lys Gly Tyr Val Asn Asn Pro Glu Ala Thr Lys Glu Leu Ile Asp Glu			
271	405	410	415	
274	Glu Gly Trp Leu His Thr Gly Asp Ile Gly Tyr Tyr Asp Glu Glu Lys			
275	420	425	430	

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278 His Phe Phe Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly
279 435 440 445
282 Tyr Gln Val Pro Pro Ala Glu Leu Glu Ser Val Leu Leu Gln His Pro
283 450 455 460
286 Ser Ile Phe Asp Ala Gly Val Ala Gly Val Pro Asp Pro Val Ala Gly
287 465 470 475 480
290 Glu Leu Pro Gly Ala Val Val Val Leu Glu Ser Gly Lys Asn Met Thr
291 485 490 495
294 Glu Lys Glu Val Met Asp Tyr Val Ala Ser Gln Val Ser Asn Ala Lys
295 500 505 510
298 Arg Leu Arg Gly Gly Val Arg Phe Val Asp Glu Val Pro Lys Gly Leu
299 515 520 525
302 Thr Gly Lys Ile Asp Gly Arg Ala Ile Arg Glu Ile Leu Lys Lys Pro
303 530 535 540
306 Val Ala Lys Met
307 545
310 <210> SEQ ID NO: 3
311 <211> LENGTH: 548
312 <212> TYPE: PRT
313 <213> ORGANISM: Luciola lateralis
315 <400> SEQUENCE: 3
317 Met Glu Asn Met Glu Asn Asp Glu Asn Ile Val Tyr Gly Pro Glu Pro
318 1 5 10 15
321 Phe Tyr Pro Ile Glu Glu Gly Ser Ala Gly Ala Gln Leu Arg Lys Tyr
322 20 25 30
325 Met Asp Arg Tyr Ala Lys Leu Gly Ala Ile Ala Phe Thr Asn Ala Leu
326 35 40 45
329 Thr Gly Val Asp Tyr Thr Tyr Ala Glu Tyr Leu Glu Lys Ser Cys Cys
330 50 55 60
333 Leu Gly Glu Ala Leu Lys Asn Tyr Gly Leu Val Val Asp Gly Arg Ile
334 65 70 75 80
337 Ala Leu Cys Ser Glu Asn Cys Glu Glu Phe Phe Ile Pro Val Leu Ala
338 85 90 95
341 Gly Leu Phe Ile Gly Val Gly Val Ala Pro Thr Asn Glu Ile Tyr Thr
342 100 105 110
345 Leu Arg Glu Leu Val His Ser Leu Gly Ile Ser Lys Pro Thr Ile Val
346 115 120 125
349 Phe Ser Ser Lys Lys Gly Leu Asp Lys Val Ile Thr Val Gln Lys Thr
350 130 135 140
353 Val Thr Ala Ile Lys Thr Ile Val Ile Leu Asp Ser Lys Val Asp Tyr
354 145 150 155 160
357 Arg Gly Tyr Gln Ser Met Asp Asn Phe Ile Lys Lys Asn Thr Pro Gln
358 165 170 175
361 Gly Phe Lys Gly Ser Ser Phe Lys Thr Val Glu Val Asn Arg Lys Glu
362 180 185 190
365 Gln Val Ala Leu Ile Met Asn Ser Ser Gly Ser Thr Gly Leu Pro Lys
366 195 200 205
369 Gly Val Gln Leu Thr His Glu Asn Ala Val Thr Arg Phe Ser His Ala
370 210 215 220

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373 Arg Asp Pro Ile Tyr Gly Asn Gln Val Ser Pro Gly Thr Ala Ile Leu
 374 225 230 235 240
 377 Thr Val Val Pro Phe His His Gly Phe Gly Met Phe Thr Thr Leu Gly
 378 245 250 255
 381 Tyr Leu Thr Cys Gly Phe Arg Ile Val Met Leu Thr Lys Phe Asp Glu
 382 260 265 270
 385 Glu Thr Phe Leu Lys Thr Leu Gln Asp Tyr Lys Cys Ser Ser Val Ile
 386 275 280 285
 389 Leu Val Pro Thr Leu Phe Ala Ile Leu Asn Arg Ser Glu Leu Leu Asp
 390 290 295 300
 393 Lys Tyr Asp Leu Ser Asn Leu Val Glu Ile Ala Ser Gly Gly Ala Pro
 394 305 310 315 320
 397 Leu Ser Lys Glu Ile Gly Glu Ala Val Ala Arg Arg Phe Asn Leu Pro
 398 325 330 335
 401 Gly Val Arg Gln Gly Tyr Gly Leu Thr Glu Thr Thr Ser Ala Ile Ile
 402 340 345 350
 405 Ile Thr Pro Glu Gly Asp Asp Lys Pro Gly Ala Ser Gly Lys Val Val
 406 355 360 365
 409 Pro Leu Phe Lys Ala Lys Val Ile Asp Leu Asp Thr Lys Lys Thr Leu
 410 370 375 380
 413 Gly Pro Asn Arg Arg Gly Glu Val Cys Val Lys Gly Pro Met Leu Met
 414 385 390 395 400
 417 Lys Gly Tyr Val Asp Asn Pro Glu Ala Thr Arg Glu Ile Ile Asp Glu
 418 405 410 415
 421 Glu Gly Trp Leu His Thr Gly Asp Ile Gly Tyr Tyr Asp Glu Glu Lys
 422 420 425 430
 425 His Phe Phe Ile Val Asp Arg Leu Lys Ser Leu Ile Lys Tyr Lys Gly
 426 435 440 445
 429 Tyr Gln Val Pro Pro Ala Glu Leu Glu Ser Val Leu Leu Gln His Pro
 430 450 455 460
 433 Asn Ile Phe Asp Ala Gly Val Ala Gly Val Pro Asp Pro Ile Ala Gly
 434 465 470 475 480
 437 Glu Leu Pro Gly Ala Val Val Val Leu Glu Lys Gly Lys Ser Met Thr
 438 485 490 495
 441 Glu Lys Glu Val Met Asp Tyr Val Ala Ser Gln Val Ser Asn Ala Lys
 442 500 505 510
 445 Arg Leu Arg Gly Gly Val Arg Phe Val Asp Glu Val Pro Lys Gly Leu
 446 515 520 525
 449 Thr Gly Lys Ile Asp Gly Lys Ala Ile Arg Glu Ile Leu Lys Lys Pro
 450 530 535 540
 453 Val Ala Lys Met
 454 545
 457 <210> SEQ ID NO: 4
 458 <211> LENGTH: 548
 459 <212> TYPE: PRT
 460 <213> ORGANISM: Luciola mingrellica
 462 <400> SEQUENCE: 4
 464 Met Glu Met Glu Lys Glu Glu Asn Val Val Tyr Gly Pro Leu Pro Phe
 465 1 5 10 15

VERIFICATION SUMMARY

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